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Filing Date	19 December 2001
First Named Inventor	Kenneth Ault
Art Unit	2137
Examiner Name	Nadia Khoshnoodi
Attorney Docket Number	NG(MS)7191

ENCLOSURES *(Check all that apply)*

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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Signature	Christopher P. Harris		
Printed name	Christopher P. Harris		
Date	12 November 2007	Reg. No.	43,660

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Kenneth Aull
Serial No.	:	10/027,607
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For	:	PUBLIC KEY INFRASTRUCTURE TOKEN ISSUANCE AND BINDING
Group Art Unit	:	2137
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Attorney Docket No.	:	NG(MS)7191

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REPLY BRIEF

Sir:

This Reply Brief is in response to the Examiner's Answer dated September 25, 2007. This Reply Brief addresses the Examiner's Answer concerning the appealed claims 1 and 3-20.

I. **Appealed Claims 1 and 11**

In the Appeal Brief filed June 4, 2007 ("Appeal Brief"), Applicant's representative argued that the claimed element reviewing, by a Tokenizing Officer, credentials of a user and forwarding a user ID number and token ID number to a certificate management system (CMS) along with an electronic form request and a signature of the Tokenizing Officer, as recited in claim 1, is not taught or suggested by U.S. Patent Pub. No. 2003/0005291, to Burn ("Burn") in view of the U.S. Patent No. 6,490,367 to Carlsson, et al. ("Carlsson"). Additionally, Applicant's representative argued that the claimed element, a Tokenizing Officer that utilizes a terminal in a badging facility to forward a unique ID number of a user to which a particular token is to be issued along with the unique ID number of the particular token to a CMS and where the CMS binds the unique ID number of the user and the particular token ID number by storing the correspondence therebetween in a directory/database, wherein the Tokenizing Officer comprises a person, as recited in claim 11, is not taught or suggested by Burn in view of Carlsson. The Examiner responded to Applicant's representative's arguments in the Examiner's Answer dated September 25, 2007 ("Examiner's Answer"), with nearly identical arguments for both claims 1 and 11. Accordingly, for purposes of convenience, Applicant's representative will merge responses (in this Reply Brief) to the Examiner's arguments regarding the rejection of claims 1 and 11. In the Examiner's Answer, the Examiner argues that:

> Examiner would like to note that Burn teaches a unique ID number stored in the token (Fig. 5, element 140: "USER PIN" and par. 36, lines 6-8: In steps 85 and 90, personal identification numbers

(PINs) are randomly generated.) (See Examiner's Answer, Pages 8-9 and 13-14)

Applicant's representative respectfully disagrees with the Examiner's conclusion that the PIN disclosed in Burn corresponds to a unique ID number, as recited in claims 1 and 11. Nothing in Burn teaches or suggests that the disclosed PIN is unique to a token. In fact, as stated by the Examiner, Burn explicitly discloses that PINs are randomly generated. Applicant's representative respectfully submits that since the PINs are randomly generated, it is very possible that two hardware token processors (HTPs) disclosed in Burn would have the same PIN stored on them.

Moreover, as is known, a PIN's length is typically chosen such that a user of the PIN would be able to remember the PIN without needing to write it down. As an example, most bank debit cards have a four digit PIN. Obviously, a four digit PIN only allows for 10,000 different PINs. Thus, Applicant's representative respectfully submits that one skilled in the art would readily recognize the difference between a PIN (as disclosed in Burn) and a token ID number, as recited in claims 1 and 11.

Additionally, the Examiner also argues that element 130 disclosed in FIG. 5 of Burn (e.g., an HTP ID number) corresponds to the unique token ID recited in claims 1 and 11 (See Examiner's Answer, Pages 9 and 14). Applicant's representative respectfully submits that the Examiner is providing inconsistent arguments, since (as stated above) the Examiner argued that a PIN corresponds to the unique token ID recited in claims 1

and 11. Applicant's representative respectfully submits that since the Examiner has provided inconsistent arguments that the Examiner has failed to show that claims 1 and 11 are made obvious by the teachings of Burn and Carlsson.

Moreover, in rejecting claims 1 and 11, the Examiner also states:

> [B]urn teaches sending credentials to a CA... So, taking that in combination with Carlsson's Tokenizing Officer verifying the user's identity in person and sending the user ID and sequence request number for the certificate (which could be replaced with the token ID number taught in Burn), yields a secure system of authenticating and validating users before binding their identity to a certificate and a hardware token. The motivation for this combination as provided by Carlsson et al., is that having a person as the Tokenizing Officer is easy to administer and adds security because the credentials are checked by someone who is acquainted with the users so it is harder to forge an identity in the binding process. (See Examiner's Answer, Pages 11 and 16)

To begin with, Applicant's representative respectfully submits that the Examiner's Answer is the first time the Examiner has offered this argument (e.g., that it would have been obvious to replace a certificate sequence number disclosed in Carlsson with the HTP ID number disclosed in Burn). In particular, in the Final Office Action dated October 6, 2006 ("Final Action"), the Examiner contended that a sequence number of a certificate request is equivalent to a token ID number (See Final Action, Page 2). Thus, Applicant's representative will respond to this argument made by the Examiner for the first time in this Reply Brief.

It would not have been obvious to combine and modify the teachings of Burn and Carlsson in the manner suggested by the Examiner in the Examiner's Answer. The U.S. Court of Appeals for the Federal Circuit ("Federal Circuit") has found that

one of ordinary skill in the art would not have reasonably elected trading the benefit of security for that of convenience, since tradeoffs concern what is feasible, while motivation to combine requires what is desirable, not just what is feasible. *Winner Int'l Royalty Corp. v. Ching-Rong Wang* 202 F.3d 1340, 1349 53 U.S.P.Q.2d 1580 (Fed. Cir. 2000). By analogy, Applicant's representative respectfully submits that it would not have been obvious to combine and modify the teachings of Burn and Carlsson to trade the benefit of convenience and cost savings for that of security.

In particular, Burn discloses an enrollment process that can be carried out on the Internet via a Web Browser 230 (See Burn, FIG. 8 and Pars. [0041]-[0042]). Any modification of Burn to include the CA administrator disclosed in Carlsson would increase the cost to implement the system disclosed in Burn; since it is presumable that employment of a CA administrator would substantially increase administrative costs. Additionally, modifying Burn to include the CA administrator disclosed in Carlsson would result in a substantially less convenient system; since such a purported combination would require an interaction between an end user and the CA administrator. Thus, if Burn were to be modified in the manner suggested by the Examiner in the Examiner's Answer, a user would be unable to complete the enrollment process at a remote location, since the purported combination of Burn and Carlsson would require that the user and the CA administrator be within physical proximity. Therefore, Applicant's representative respectfully submits that it would not have been obvious to combine and modify the teachings of Burn and Carlsson in the manner suggested by the Examiner in the Examiner's Answer. Accordingly, claims 1 and 11 are patentable over the cited art.

II. **Appealed Claims 3 and 13**

The method and system recited in claims 3 and 13 ensure a user has at most, one token. In the Appeal Brief, Applicant's representative argued that Burn taken in view of Carlsson does not teach or suggest that a user cannot possess more than one personalized card (e.g., a token). The Examiner responded by stating the following:

> [B]urn teaches that an enrollment process is necessary in order to maintain a system where each HTP is associated with one user in paragraph 47, lines 13-17: 'Also using distinct certificates helps to ensure that the HTP engaged in enrollment is the correct HTP and that no other HTP can inadvertently receive user-specific certificates that are encrypted with a distinct non-user specific certificate.' (See Examiner's Answer, Pages 12 and 17).

Applicant's representative respectfully submits that the cited section of Burn (Par. [0047]) is completely devoid of any teaching or suggestion of any process or structure that would ensure that a user has at most, one token, in contrast to the method and system recited in claims 3 and 13, respectively. At best, the cited section of Burn prevents an HTP from being associated with more than one user, but does not prevent the user from possessing more than one HTP.

Moreover, in the Examiner's answer, the Examiner cites various sections of Carlsson that disclose methods for revoking certificates when a user's status has changed (e.g., the user has been found to be unreliable, or his/her role has changed). In particular, the Examiner argues:

> [i]t would have been obvious to modify the method disclosed in Burn and Carlsson et al. from claim 3 (and claim 13) to incorporate a means for checking the token ID number and flags of the tokens (disclosed in Burn) against other tokens and revoking tokens which are no longer valid since the user's certificate has been revoked (disclosed in Carlsson et al.) (See Examiner's Answer, Pages 13 and 18).

Applicant's representative respectfully submits that even if what the Examiner contends is true, the purported combination of Burn and Carlsson would still not make claims 3 and 13 obvious. That is, the Examiner contends that it would have been obvious (from the teachings of Burn and Carlsson) to revoke tokens which are no longer valid. However, Applicant's representative respectfully submits that such an argument is irrelevant in regard to the patentability of claims 3 and 13. In claims 3 and 13, the CMS revokes redundant user tokens. In contrast, the purported combination of Burn and Carlsson would revoke tokens which are no longer valid, while nothing in the purported combination of Burn and Carlsson would prevent the user from having multiple valid tokens. Accordingly, Burn taken in view of Carlsson fails to make claims 3 and 13 obvious. Thus, claims 3 and 13 are patentable over the cited art.

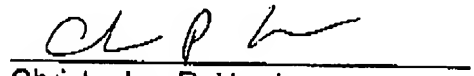
CONCLUSION

In view of the foregoing remarks, Applicant's representative respectfully submits that the present application is in condition for allowance. Applicant's representative respectfully requests reconsideration of this application and that the application be passed to issue.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

Date 12 November 2007



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